Remarks

The Examiner's rejection of claims 5 and 7 under 35 U.S.C. §112 (section 1, second occurrence) are moot in view of the Applicant's cancellation (without prejudice) of those claims.

The Examiner rejects claims 1 to 4, 6, 8 and 17 under 35 U.S.C. §103(a), in section 2, second occurrence. In response, the Applicant's cancel those claims without prejudice.

Turning to claim 9, in section 3, the Examiner rejects this claim under 35 U.S.C. §103(a) as being unpatentable over Lin et al (US 6,278,812) in view of Schroeder (US 6,198,856) and additionally in view of Graves et al (US 2002/0012143). Reconsideration is requested.

Applicants submit that one skilled in the art would not be motivated to combine the teachings of these three items of prior art not only because of the number of steps involved (it is noted the Examiner has taken two whole pages to mount the obviousness rejection) but also because two different optical switch technologies are described. While Lin and Graves concern MEMS devices, Schroeder uses bubble based switch devices.

However, even if one skilled in the art were to combine the three ref rences, he would not arrive at the teaching of the present invention for the following reasons. The Examiner has admitted that the "WDD/WDM devices of Graves does not disclose input/output mirror arrays". The Examiner also asserts that "a recitation with respect to the manner in which a claimed apparatus is intended to be employed does *not differentiate the claimed apparatus from a prior art apparatus satisfying the* claimed structural limitations". However, Applicants strongly submit that the recitation of input and output micromirror arrays is a wholly different structural limitation to the WDD/WDM devices of Graves. This is not a difference in the manner in which a claimed apparatus is intended to be employed but a clear cut structural difference. A WDD (and correspondingly a WDM) device allows wavelengths to be separated out. In contrast, the input micromirror (and correspondingly the output micromirror) does not separate out wavelengths but, rather, allows an optical signal to be switched in time. In short, the input/output micromirror arrays of the present invention allow a single test light source and test detector to be used while routing the test signal to the first test array of each optical switch in the switch matrix in turn (see page 11 lines 8 to 13 of the description). The WDD/WDM devices of Graves simply do not provide this functionality. The Examiner's assertion that "it would have been obvious to someone of ordinary skill in the art ... to replace the WDD/WDM devices of Graves with MEMs micromirror arrays" is an example of hindsight reasoning and is wholly unsupported by the references cited by the Examiner.

In section 5, the Examiner also rejects claim 18 under 35 U.S.C. §103(a) as being unpat ntable over Lin in view of Schroeder and further in view of Schroeder (US 6,320,995). Reconsideration is requested.

The Applicants again submit that one skilled in the art would not be motivated to combine these three teachings, for similar reasons to those given above in respect of claim 9. However, even if one skilled in the art were to combine these references, he would not arrive at the present invention as claimed in claim 18 for the following reasons. Claim 18 concerns an optical network comprising at least two nodes. The point is that implementing the present invention over an optical network having two nodes, it is possible to test the communication path and equipment between the two nodes this may include transmission fibre, one or more intermediate nodes, amplification systems and so on.

The Examiner asserts that Schroeder (US 6,320,995) teaches the provision of "at least two (68 and 70) nodes each comprising an optical switch (68 and 70)". This is incorrect. As the Examiner goes on to indicate, figure 4, and Schroeder in general, describes a multi stage optical switch. Items 68 and 70 of figure 4 are merely two bubble switch matrixes connected together to form a larger switch. However, the whole multistage optical switch forms merely one component – i.e. it may only be included in one node of a network. Agilent Technologies Inc, the Assignee of Schroeder (995), is a component manufacturer, not a network integrator such as the Assignee of the present application. Thus, it is not surprising that applications

assigned to Agilent Technologi s inc, are concerned with components and not optical networks. In fact, there is no teaching whatsoever in Schroeder (995) concerning nodes of an optical network, let alone providing test arrays at micromirror switching arrays of at least two nodes of a network as well as test input and monitoring arrangement as claimed in claim 18. Furthermore, the purpose of enabling the testing of equipment between two nodes in an optical network is nowhere described in Schroeder (995). Thus, even if it were hypothetically accepted that one skilled in the art would combine the teachings of Lin, Schroeder and Schroeder (995), he would not arrive at the present invention as claimed in claim 18.

The Examiner will note that new claims 20 and 21 have been introduced which are method claims respectively corresponding to claims 9 and 18. For the reasons given above, Applicants submit that these claims are novel and non-obvious over the prior art cited.

Applicants therefore request favorable reconsideration of the present application.

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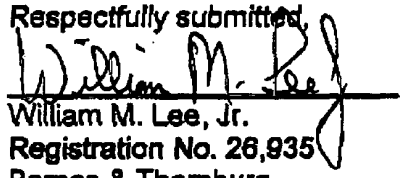
Respectfully submitted,



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